

**17P450**

(Pages: 2)

Name.....

Reg. No.....

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2019**

(CUCSS - PG)

(Applied Geology)

**CC15P GEL4 C13 – GEOCHEMISTRY AND SEDIMENTOLOGY**

(Regular/Improvement/Supplementary)

(2015 Admission onwards)

Time: Three Hours

Maximum: 36 Weightage

I. Short Answer Type Questions. Answer *all* questions.

1. Geochemical constitution of continental crust.
2. Geochemical classification of elements.
3. First law of thermodynamics.
4. Eh & Ph.
5.  $^{14}\text{C}$
6. Fission track method of dating.
7. Emission spectroscopy.
8. Sieve analysis.
9. Positive skewness.
10. Argillaceous sedimentary rocks.
11. Evaporates.
12. Mineralogical maturity.
13. Phosphatic deposits.
14. Diagenesis.

**(14 x 1 = 14 Weightage)**

II. Short Essay Type questions. Answer any *seven* questions.

15. Geochemical cycles.
16. Enthalpy, entropy, heat capacity and free energy.
17. Gibb's phase rule and its application to mineralogical systems.
18. Radioactive decay schemes.
19. Principles of Flame photometer.
20. Grain size classification and grade scale.
21. Carbanaceous deposits.
22. Clastic and non-clastic textures.
23. Arenaceous sedimentary rocks.

24. Heavy mineral separation and identification.

**(7 x 2 = 14 Weightage)**

III. Long essay type questions. Answer any *two* questions.

25. Describe the U-Th-Pb method of dating.

26. Explain chemical analysis using Atomic Absorption Spectrometer.

27. Describe the different sedimentary structures.

28. Explain the evolution of sedimentary basin in relation to plate tectonics.

**(2 x 4 = 8 Weightage)**

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